

THE BRICKBUILDER.

VOL. 13

DECEMBER 1904

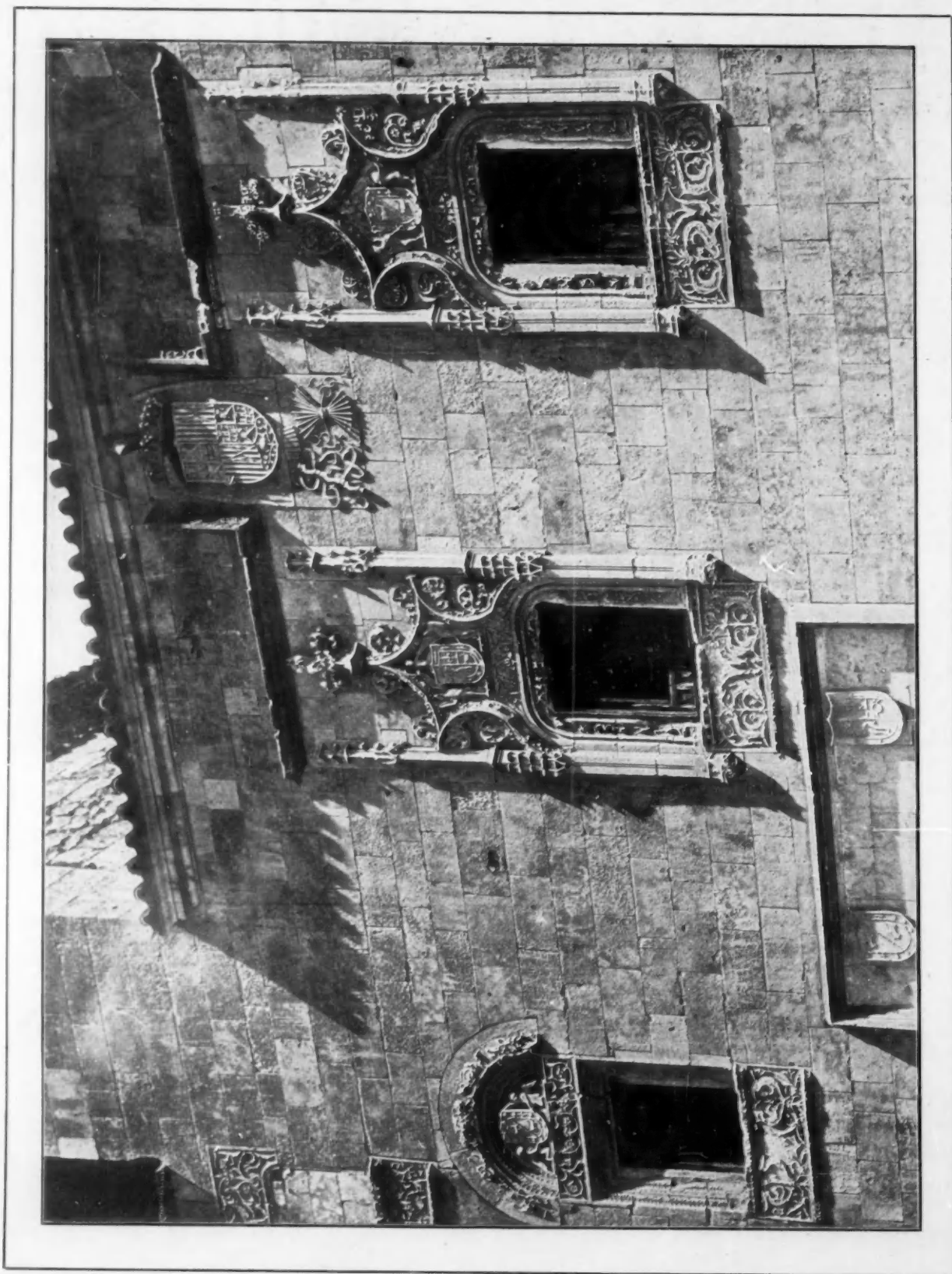
No. 12

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FROM WORK OF BABB, COOK & WILLARD, CARRÈRE & HASTINGS ET AL.,
PERCY GRIFFIN, HOWELLS & STOKES, H. VAN BUREN,
MAGONIGLE, McKIM, MEAD & WHITE.

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A DETAIL FROM THE UNIVERSITY, SALAMANCA, SPAIN.

THE BRICKBUILDER

VOL. 13 No. 12 DEVOTED TO THE INTERESTS OF ARCHITECTURE IN MATERIALS OF CLAY DECEMBER 1904

THE BRICKBUILDER.

PUBLISHED MONTHLY BY

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ADVERTISING.

Advertisers are classified and arranged in the following order:—

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Advertisements will be printed on cover pages only.

CHURCH COMPETITION—JURY OF AWARD.

The following named gentlemen have consented to judge THE BRICKBUILDER Church Competition:

Frank Miles Day, Philadelphia.
C. Grant LaFarge, New York.
Ralph Adams Cram, Boston.
R. Clipston Sturgis, Boston.
C. Howard Walker, Boston.

The competition will be judged on Saturday, January the sixth.

The awards will be announced in THE BRICKBUILDER for January.

About one hundred and twenty-five sets of drawings were submitted.

THE BRICKBUILDER COMPETITION FOR A FIREPROOF HOUSE.

WE announce elsewhere in this issue the terms of a competition for the design of a fireproof house of moderate cost. We believe the present to be a transition period in the construction of moderate priced houses. The day of the speculative builder is by no means past, and we may yet see long rows of uninteresting blocks,

constructed without thought or æsthetic reason, but the people are awake, as never before, to the personality of the home. We anticipate that this competition will bring out some interesting ideas and show the possibilities of artistic design in strictly fireproof construction. The influence of such a competition will, we believe, be far-reaching and encourage study along new and profitable lines. That there is a demand for fireproof houses of moderate cost is abundantly evinced to us every day. It remains only for our architects to show that they may be designed and built in a manner at once artistic and practical.

The complaint is often made that whereas the painter or the sculptor can in his studio elaborate his artistic productions, the architect is denied such opportunity except in as he finds a complacent client who is willing to experiment. This competition goes far to obviate such trouble, and if the results are as satisfactory as have been the results of similar competitions held by this journal in the past, THE BRICKBUILDER will feel that it has evoked a distinct contribution to the advancement of good building and artistic construction.

PROMISED ARTICLES.

THERE are several series of articles treating of special types or classes of buildings which have been promised the readers of THE BRICKBUILDER, but which have not as yet been presented. It must not be assumed, however, that these articles have been in any sense abandoned. Our announcements are usually made only after the preliminary work on a proposed series has been done. In connection with many of the articles which have been promised there has remained a great deal of work to be accomplished, in the form of study, gathering of data, illustrations, etc., before they would have the value which it is intended they shall possess. It has never been the policy of this journal to present material for the mere purpose of filling space. On the contrary, the especial object has been to present articles which will have a real and practical value to the architect. Furthermore, these articles are prepared, not by theorists, but by men who have had a large and practical experience in the particular line of work which is to be treated. We cannot always command the whole time of these men, therefore we have been obliged to wait until they could work out the most perfect solution and present the most comprehensive study of the problems.

This journal was started with a somewhat restricted field. Year by year the field has enlarged. The scope

of the work presented in our columns has become greater and we believe the material given has been of increasing value. This, however, requires each year more care and more forethought, and the non-appearance of promised articles means, not neglect, but more careful consideration and ultimately more valuable contributions.

A LOST OPPORTUNITY.

EACH of the expositions which have been held in this country has given occasion for some remarkable displays of architecture in the grouping and the designing of the buildings. Indeed many will remember these fairs more for their architectural setting than for any other one feature, and enlisting as they have the abilities of many of the best members of the profession, there has resulted a remarkable development which has profoundly influenced the current architecture of the day. In a certain degree architecture has been very prominent in these fairs, but it has been treated rather as a necessary practical background than as one of the fine arts to be intelligently displayed by itself; and any one who has thoughtfully examined the various exhibits has doubtless been struck by the manner in which architecture is at once conspicuous by its presence and by its neglect. It is in just this respect that we feel the profession has let slip an opportunity which might have been turned to great good. Each of the fairs has included a large and imposing building devoted entirely to the exhibition of the fine arts, so called, by which has been understood principally painting, with a few bits of statuary and a scanty and hardly typical presentation of architectural drawings. Each fair has also included special buildings devoted to education and to various subdivisions of the mechanic arts, and there is indeed hardly any art or industry except architecture which has failed to be more or less appropriately housed and displayed by itself. Apparently the idea of treating architecture as a subject worthy to be given an independent building, if it has occurred to our fair managers, has been entirely neglected. And yet if such a building had been provided and under the direction of the American Institute of Architects the exhibits therein had been properly selected and presented, there would have been very little trouble in filling it with most varied and interesting matter, all directly in the line of architecture as a fine art and a science, and absolutely distinct from any of the advertising features which are so apt to thrust themselves upon one in a world's fair. There has thus been an opportunity lost to do a real service to the community and to the profession.

The popular interest in the work of the architect is too manifest and unquestioned to justify the relegating of the mother art to a secondary position, nor is it fair to treat architectural exhibits as a side issue. Had the opportunities been properly utilized a building, even though but a small one, should have contained the official architectural exhibit. It would not have been at all difficult to secure such interest as would have resulted in its being thoroughly well designed, representing in its plan and in its style the best current practice and including within its walls such distinctive groups as can so readily be imagined by any one conversant with current work. The field is a large one and would include not merely the drawings or

sketches of the architects, but many of the important, though minor departments which are so strongly correlated to architecture and are properly included in the work which the architect supervises. In fact the field is almost limitless, provided the opportunity were recognized in time and the selection, arrangement and classification of the exhibits were intrusted to the best hands.

Whether there is ever another exhibition in this country like the St. Louis Fair is a question which cannot be settled in advance. We believe these world's shows have reached a magnitude which tends to detract greatly from their usefulness. No one tries to wander through all the miles of avenues so beset on every hand by advertisements that the whole fair seems like a gigantic bazaar, rather than an exhibition of the arts and industries; and it would seem almost inevitable that a reaction would take place and that the next world's fair would be a great deal smaller, more rigid in its selection, more exclusive of mere commercialism and that the external architecture would be even better representative of our best practice. Architects have pretty generally managed the last three world's fairs, and they have made them gigantic exhibitions of the architectural work of a few of our best-known men. We hope the next fair, when it does come, will recognize the force of what we have just stated, will accord to architecture its rightful position as the all-inclusive art, and afford a large, ample and thoroughly well-designed building exclusively for the reception and exhibition of the art and science of the profession. We believe that such a building would prove not only an educational force, but would attract the eager notice of all intelligent people. Our nation is ready for the highest architectural effort. The people want it, and it needs only intelligent direction by the American Institute and by those who are properly qualified to take the lead to cultivate a very high appreciation of what we are trying to do, and an international exhibition certainly offers a splendid opportunity for just this kind of work.

A PLAN has been under consideration for quite a while to erect, in Fort Greene Park, Brooklyn, N. Y., a monument to the prison ship martyrs of the American Revolution. This movement has finally taken definite shape, and the committee having the matter in charge have instituted a limited competition, between three firms of architects only, for the design of the monument. The action of the committee has called forth a protest from the Brooklyn Chapter of the American Institute of Architects in the form of a series of resolutions passed by the Board of Directors and unanimously adopted by the chapter at large, objecting to the limitation of the choice of the design of the monument to any three firms, however high standing in their character, and claiming that a competition of this sort is strictly against all precedent in securing designs for the public monumental work adopted by the leading countries of Europe, and also generally adopted in securing designs for the principal monumental structures in the United States, while the exclusion from the competition of all Brooklyn architects and sculptors is also objected to. The resolutions request the committee of the association to reconsider their action and to institute an open competition for securing the design.

Modern Ecclesiastical Architecture.*

BY RT. REV. HENRY C. POTTER.

(Bishop of New York.)

IT is a good sign when, in our American periodicals which deal with the construction of buildings, the way is open for a free and candid discussion of church architecture. And this for two reasons: first, because, just now, we are supposed to be called upon to deal with new problems in church building, and then because you cannot hope to get people to do their best until they *think* their best; and because the question, *What is the best?* is a question which cannot be settled by considerations of mere utility.

There ought to be a suggestion, at this point, of real value in a fact which one cannot well leave out of account. When our fathers came to these shores—I am talking now of the men who, from Holland, France, England or Scotland, came to America—nothing was more impressive than the early steps which they took to build churches. Some of them still survive, in New England, Virginia, Charleston and elsewhere on our Atlantic coast. I don't know that any of them could be called beautiful, but they were, and always aimed to be, *distinctive*. When one came into the town or village where a house of worship was he didn't mistake it for a tavern or a shop. It had a certain note of its own, and that note was always something dignified, serious, august. We have changed all that now. There is a craze abroad for making churches look "sociable," "cozy," "homey" and the like, and one cannot be sure when he enters one that it is not a music hall or a lecture room into which he has found his way.

Now there are architects who think this sort of thing clever, and who, in it, follow the lead of committeemen, and (alas) of pastors more ignorant than themselves. It never seems to have occurred to these incarnations of stupidity and irreverence that the very things which you ought *not* to want in a church are "homeyness," "sociability" and the like! I can find these things in the kitchen, if I must have them; but the first condition of a church ought to be that it appeals to, and awakens in me, a whole group of emotions which have nothing to do with mere sociability or any of that family of emotions. We are constantly wondering why Gothic architecture—which, if anything, is rather ill adapted to our climate—has found so wide a home here. But Gothic architecture is religious architecture, though by no means the only religious architecture; and when Mr. Beecher, as I have been told, on first entering Chester Cathedral, and hearing Evensong, put his head down and burst into tears, it was not alone the sublime singing of the psalter that moved him, though he thought so! No honest mind that reads these lines will deny that mere outline, color, proportion and the like, in one word what, in secular connections, we call "environment," has a direct effect upon the mind, the imagination, the emotions, upon something deeper even than these. You cannot be in a forest without feeling this, nor in the streets of a great capital, nor in a theater. Each of these creates its own atmosphere and produces its own impression. And do you think, my brother who art an architect or a commit-

teeman, that you can toss all this over the wall, and still build a church which shall worthily express the idea of a place where one comes into a Divine Presence, and seeks to be engaged in worship? Well, *you can't!* And that is the whole of it. Religion, as truly as domesticity, or pleasure, or letters, or art, demands its own shrine and its own environment, and it is in vain that modern architecture seeks to evade or ignore that fact.

"Very well," says the modern architect, "I admit all that; but if I do, then you critics and objectors must admit another thing, and that is that religion in these modern days makes a more complex demand upon the modern architect. In old times religion meant certain things; now it is assumed to mean much more. In old times it was a *viaticum*, by means of which men and women and children hastened through a wicked world, ignoring it, and the conditions of life in it, as much as possible. Now you preachers tell us that the whole of man is divine, and that, as Christ did, the church to-day must touch all departments of life and beautify and ennoble them; and so you have a great variety of agencies and instrumentalities to these ends. Why, then, should we be faulted for trying to build the church edifice in such a fashion as to serve these ends?" Simply, the answer is, because there is another and better way. Touch all life, its culture, its refinements, its pleasures even, with the high and fine spirit of Jesus Christ. Build your parish houses and Young Men's Christian Association gymnasiums and all the rest as discerning that the body is sacred as is the soul. But when it comes to worship and the place for worship, build that to lift men's thoughts and hungers up to God, and make church architecture as, through all the Christian ages a reverent art has done, the handmaid of praise and worship.

* With Bishop Potter's paper we begin a series of articles treating of ecclesiastical architecture, in which will be given the views of clergymen whose interests are known to extend to the architectural expression of the church. These opinions will undoubtedly be of the utmost helpfulness to architects who are endeavoring to express the idea of the church in a fitting form.

The clergy often have very definite and valuable ideas and would naturally regard church architecture from a standpoint which must be appreciated by the architect if the best results are to be achieved. The function of THE BRICKBUILDER in this series, which will include Episcopal, Catholic, Evangelical and Christian Science churches and the Synagogue, will be to present the matter in such form as to constitute a symposium of the views upon the subject held by representative men of the various denominations. In this materialistic age we are apt to forget that architecture is essentially a religious art, that it has in the past shown its best manifestations through the medium of ecclesiastical structures, and that tradition reaching back to the pyramids links architecture always with the religious manifestations of each nation.

The opinions of the clergy will be supplemented by the presentation of the strictly architectural side of the question in such shape as shall embody all the leading points which must be considered in planning the church edifice, same to be accompanied by illustrations of the best examples of recent work. It will be found that while the points of view of the clergy and the architect are not identical, the results aimed at by each are practically the same and constitute the highest aim of the architect, the expression of the religious thought of his times in the concrete form of church architecture. — EDITORS.

Some Recent Brick Churches in England.

BY R. RANDAL PHILLIPS.

THE criticism of the beadle of Mains, that he was "sair fashed" with the pillars of Glasgow Cathedral, would hardly be applicable to the modern English church, for, by the development of the hall plan, the pillars between nave and aisles are reduced to a minimum so as to give every one an unobstructed view of preacher and choir; moreover, the question of acoustics has to be specially considered, as the sermon is not a disregarded portion of the service, and consequently the church has to be so treated and the pulpit so placed that the whole congregation is able to hear what is being said. Another factor that has very largely influenced modern church design is that of cost. Probably the cheapest building one could erect—other than a barn—would be with a sloping roof over nave and aisles, and this, with the introduction of an arcade and occasionally a clearstory, is the type often followed. As Sir Charles A. Nicholson observes in the paper which he read before the Architectural Association of London, "Architecturally the great invention of recent years is the cheap church. The cheap church of fifty years ago was ornate, but shoddily built. Twenty years ago economy was effected by building substantial and fairly complex churches of the cheapest and ugliest materials, red and yellow brick, fitting up with varnished deal furniture and stunting their general proportions." But the cheap church of to-day is very different, economy being secured by careful planning and a



ST. AGATHA'S CHURCH, BIRMINGHAM.
W. H. Bidlake, Architect.



PUTNEY PRESBYTERIAN CHURCH.
E. W. Mountford, Architect.

judicious use of plain but good materials. I may further quote Sir Charles Nicholson as prefacing some particulars of a few recent brick churches, here illustrated: "Modern church design may be said to have been evolved during the century just ended. Owing to a variety of causes, church building was at a standstill in England between the death of Queen Anne and the end of the eighteenth century. It is conceded, even by those who disagree with Thackeray's opinion of the Georges, that the influence of the Hanoverian Court was not such as to foster an enthusiastic churchmanship. Moreover, during the greater part of the eighteenth century, the nation was engaged in a life and death struggle with the French monarchy, the American colonists and afterwards with Napoleon. The population was almost stationary; the old churches sufficed for all requirements; if they fell into disrepair they were patched up; if they were considered draughty and cold, ceilings were made and partitions, pews and galleries were built; if they fell or were burnt down they were either left in ruins or else rebuilt in the plainest possible fashion. . . . The Church of England was roused to activity by the preaching of the Wesleys and the influence of the Tractarians, and since the final overthrow of Napoleon the prosperity of the nation has steadily increased. The growth of cosmopolitanism has led to the toleration of all forms of religion. The Pope is no longer looked upon as an ecclesiastical Guy Fawkes; Dissenters and Freethinkers are no longer treated as anarchists; and consequently an immense amount of building has been undertaken by the Church and other religious bodies during the past century." Gothic is still the style of the English church architect, but it is no longer the Gothic of the architectural duplicator who concerned himself with the exact imitation of thirteenth-

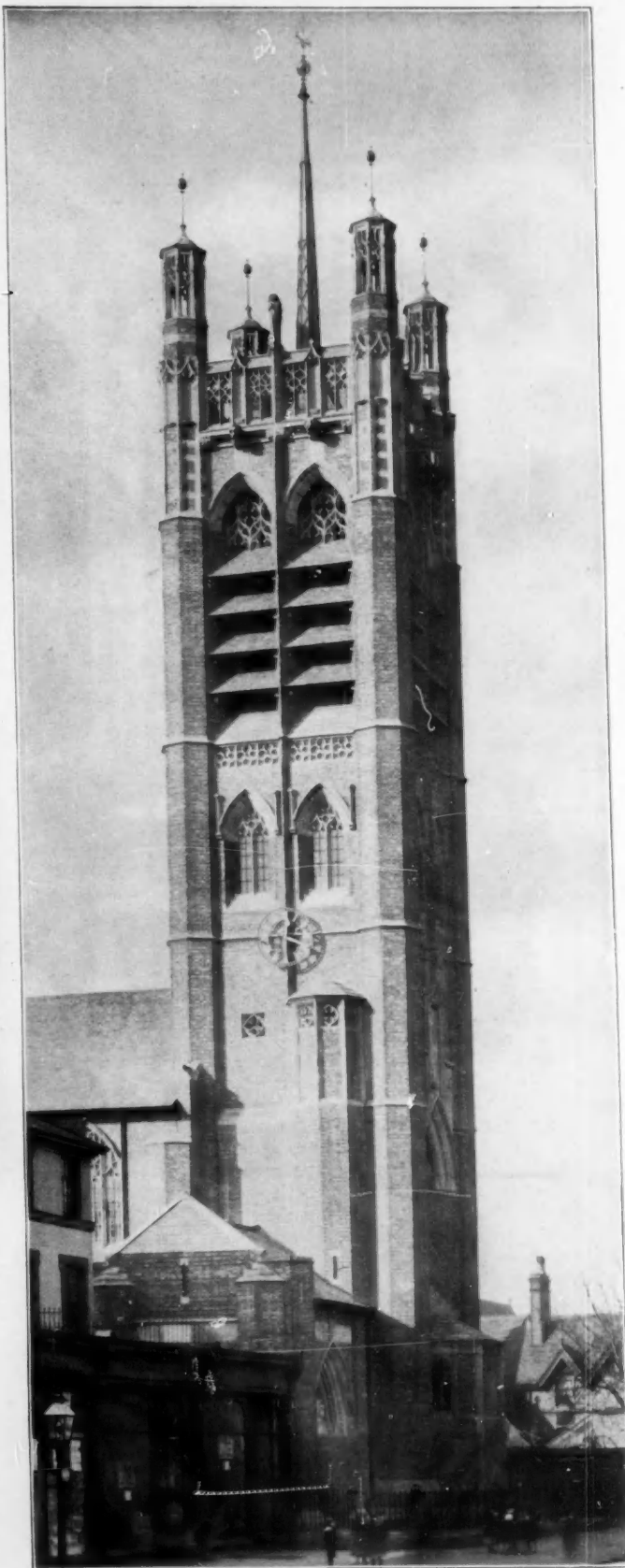
century moldings. When, however, one speaks of modern Gothic in terms of praise, it is the work of leading men one thinks of, not the indescribable hotchpot which unfortunately is so frequently perpetrated by mediocre architects up and down the country.

As a modern church designer of ability we may take W. H. Bidlake, whose career in itself furnishes many interesting side lights. As a young man he first entered the office of Colonel Edis, being afterwards with Bodley and Garner and subsequently with Dr. Rowand Anderson. In 1887 he went to Birmingham, quite unknown, and there he had an unpromising start, for his first client died bankrupt before the work was finished, while his second was a swindler against whom he had to take out a warrant, which was followed by five years' penal servitude. To-day, however, Mr. Bidlake occupies a leading position and is recognized as one of



INTERIOR ST. AGATHA'S CHURCH, BIRMINGHAM.

our most resourceful architects. He has a diplomatic way of dealing with the layman. He abjures us never to let him know that we wish to be æsthetic. Let us find a hard, concrete reason for the clearstory and open roof we wish to introduce, pointing out the danger of storms of hail — for the sake of argument — falling upon glass in skylighted roofs with school children below. "Remember it is the prosaic that tells with your committee, not the romantic. There were some dreary walls once in a certain church I had been called in to alter and renovate. They were of that depressing shade I call ecclesiastic green. Now I never can see why, if we want to get a transparent final color, we should put a coat of red, for instance, under green. So the under coats were of bright green, the first very bright, and the vicar was delighted;



TOWER OF ST. AGATHA'S CHURCH, BIRMINGHAM.



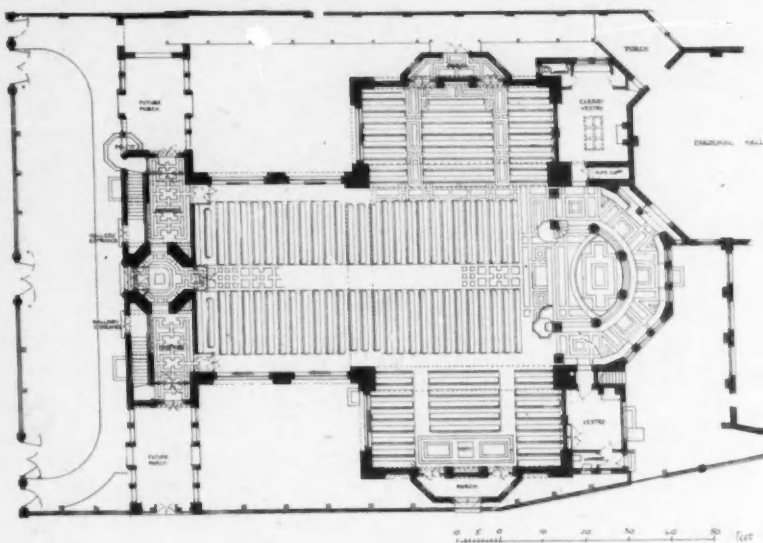
DETAIL OF TOWER, ST. AGATHA'S CHURCH, BIRMINGHAM, ENGLAND.

W. H. Bidlake, Architect.

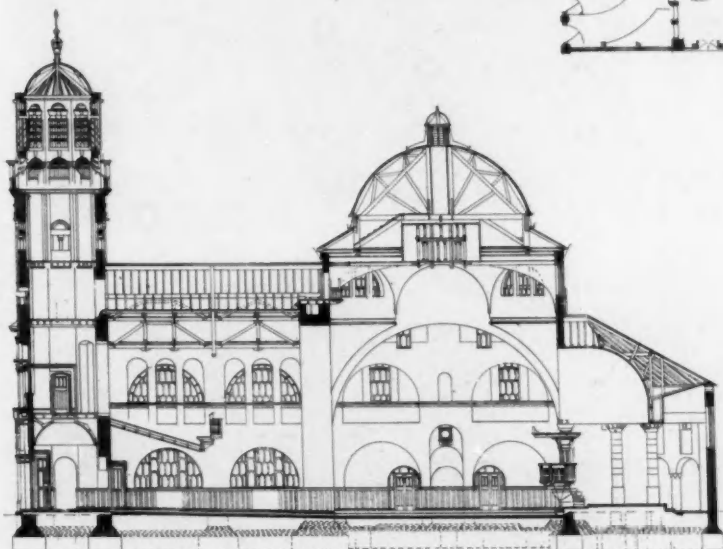
the second toned down a little, but the vicar was dubious and cried, 'Stop.' I could not convince him that when the decorative scheme was complete the final green would look light enough and bright and clear. So in his absence the contractor and I shook hands and agreed, if necessary, to go to jail together, and we put on the final and third coat of green. When the vicar saw the result he was highly pleased, but he said, 'You know I am glad I had my way with those walls'; though as a fact he does not know to this day that *his* coat of approved green was our third and final!"

Mr. Bidlake's new church of St. Agatha at Sparkbrook, Birmingham, has been built by the Birmingham Churches' Fund in fulfillment of a scheme having for its prime object the removal of churches from the center of the city, where they seemed no longer required, to those outlying districts where people have flocked of late years,—a process which has proceeded very extensively in London, to the

dred and twenty feet high to the top of the parapet, surmounted by a fleche rising forty feet higher. It is constructed to house eventually a peal of eight bells, and the large belfry lights in the upper part of the tower form



PLAN, CHRIST CHURCH, BRIXTON.

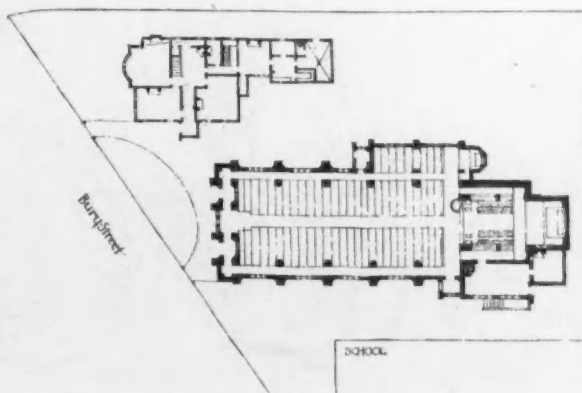


LONGITUDINAL SECTION, CHRIST CHURCH, BRIXTON.

detriment of the city churches, as I shall mention later. St. Agatha's Church cost \$75,000, which amount was paid out of the proceeds of the sale of Christ Church, for many years a well-known landmark in the center of Birmingham. The foundation stone of the old church is built into the base of the tower of the new structure, and among other things taken to Sparkbrook from New Street are the font and communion table and a quantity of the mahogany paneling of the old pews, which last has been used in the new baptistery and clergy vestry. The church is in the Late Decorated Gothic style, with an original interpretation of traditional forms. Accommodation is provided for more than one thousand worshippers. The materials employed are buff brick facing within and red and blue bricks without, with stone dressings, the roofs being covered with gray-green slates. Much of the eastern part of the church is hidden by surrounding buildings, but this is compensated for by the imposing west front and tower. The latter is one hun-

an important feature in the design. The gilt skeleton dials of a clock adorn the north and south sides of the tower. Below the belfry is the ringing stage, lighted by coupled windows in each face. From the base of the tower projects a semi-octagonal baptistery, over which is the west window, in turn surmounted by elaborate sculpture in canopied niches. The tympana of the porches on each side of the tower are filled with sculpture illustrative of the martyrdom of St. Agatha, while the arch moldings are decorated with cherubs' heads. The nave is one hundred and twenty feet long and twenty-nine feet wide, separated from wide aisles by arcades of Hollington stone arches.

Projecting shafts rise between the arches, and, terminating at the cornice level in corbels of leaf sculpture, carry transverse timber arches supporting the timber ceiling, which is partly decorated in color. The



PLAN, ST. MICHAEL'S CHURCH AND VICARAGE, EDMONTON.



ST. MICHAEL'S, EDMONTON. W. D. Caröe, Architect.



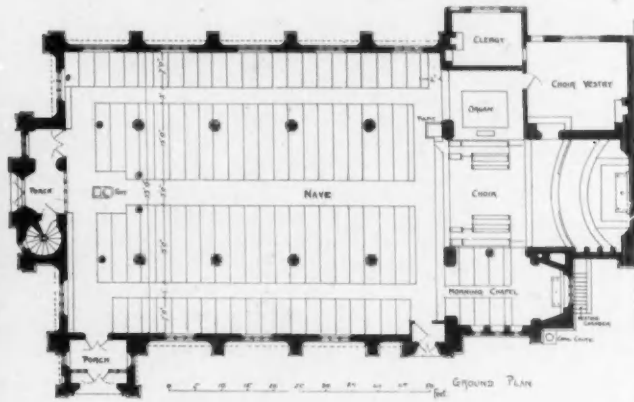
TOWER OF ST. MICHAEL'S, EDMONTON.

clearstory, and indeed the church generally, is lighted by elaborate traceried windows, nearly every one of different design. The chancel is separated by arcades from a choir transept, over which is the organ chamber on the north side, and from an ambulatory which communicates with the vestries on the south. The choir seating is of fumigated oak, that of the nave being of sequoia wood.



INTERIOR, ST. ALDHELM'S, EDMONTON.

We may now turn to a modern English church totally different in every way — Christ Church, Brixton, London. Some illustrations of it, when the building was being completed, were published in *THE BRICKBUILDER* for January, 1903, and the plans and longitudinal section now



PLAN, ST. ALDHELM'S, EDMONTON.

given may be examined advantageously in conjunction with them. Professor Beresford Pite is never likely to produce anything commonplace. He is an exponent of modern construction, with a knowledge of and respect for the past, and his designs exhibit essentially



ST. ALDHELM'S, EDMONTON.

individual treatments in many details; in Christ Church, Brixton, we note this, though we may not like all we see. The site was an awkward one, and very considerable ingenuity is exhibited in the adaptation of the church to



ST. ALDHELM'S, EDMONTON. W. D. Carøe, Architect.

it. There are no piers or columns to obstruct the view from any part, the plan being that of a wide nave with shallow transepts and an apsidal chancel having pillars forming an ambulatory, a noteworthy feature of which is that it is used by communicants, the altar rail forming the inner arc. Over the crossing is a dome carried on four brick arches four feet six inches wide and flat in section, the square being reduced to an octagon by diagonal iron girders, frankly shown; the pendentives are formed by plaster. The lining of the dome is interesting, consisting of strips of wood alternately light and dark and diminishing in size towards the crown. A ventilation shaft extends from the center of the lower inner dome to a cupola above the outer dome. The nave roof has pine trusses carrying trussed purlines (see longitudinal section) and is boarded.

Another feature of the church is the exposed iron girder across the gallery front, an unconventional introduction, but undoubtedly successful. The window tracery, too, is worthy of attention. The inside walls of the church are plastered, and scriptural texts are painted on them here and there. Accommodation is provided for twelve hundred worshipers. The cost was \$85,000.

The two churches by Mr. Carøe at Edmonton are typical examples of his work, which is good modern Gothic, carried out in a substantial but inexpensive manner. The plan is much the same in each case, being of the hall type already alluded to; in St. Michael's especially the arrangement of the nave as an unobstructed space constituting almost the whole church is noticeable. The exterior of both churches is of red bricks, with red tiles on the roofs,



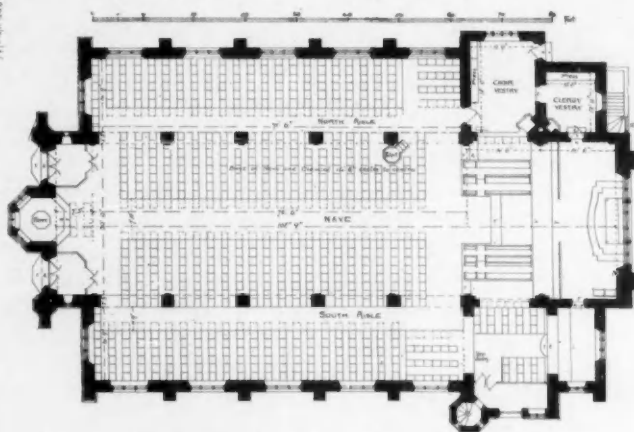
INTERIOR, ST. COLUMBA'S CHURCH, WANSTEAD.

and at St. Aldhelm's tiles laid in cement are introduced in radiating lines at the heads of the aisle windows and elsewhere. Inside, the piers of St. Aldhelm's are of white stone encased with wood, paneled and stained green, for a height of about five feet from the floor, which is of wood blocks. The roof is of open timber construction, boarded over the chancel. There is no window in the east end wall, the sanctuary being lighted by windows on either side. At the opposite end of the church is a small gallery carried on stone pillars, with a font under. Accommodation is provided for about seven hundred worshippers. St. Michael's is a much larger church, plastered white inside, with red brick arches in several parts. The chancel has a cruciform window on one side, opposite the organ. This church is covered by a fine roof in Oregon pine. The building was erected from the proceeds of the sale of St. Michael Bassishaw in the city of London, one of Wren's churches, which was pulled down and sold for about \$1,000, most of which sum was realized by the lead.

The pulling down of the city churches has been the subject of many protests. Only fifty-one remain out of the one hundred and fifteen that existed



ST. COLUMBA'S CHURCH, WANSTEAD. E. P. Warren, Architect.



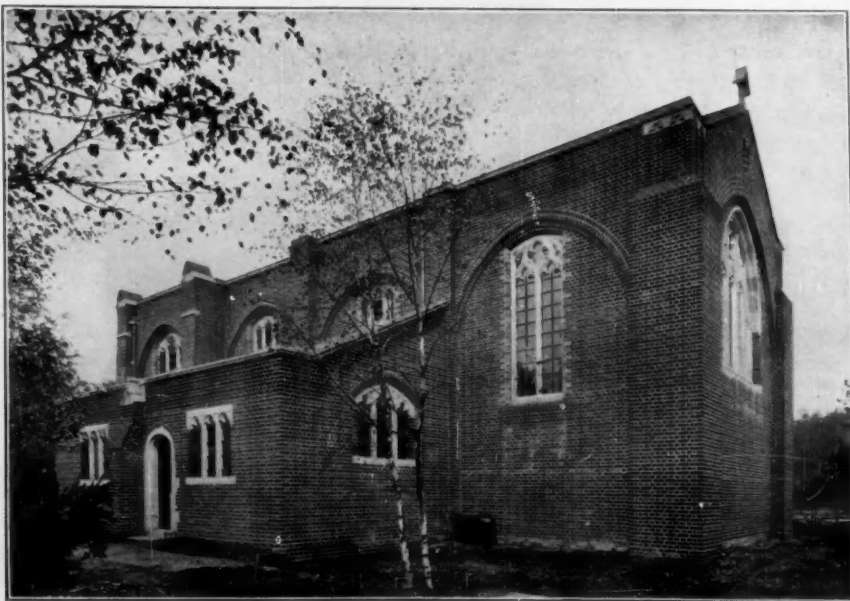
PLAN, ST. COLUMBA'S, WANSTEAD.

in the Middle Ages. St. Aldhelm's Church, exclusive of site, cost \$35,000, and St. Michael's (including the church house adjoining), \$60,000. At St. Michael's the morning chapel is dedicated to St. Michael Bassishaw, to preserve its relation to the now demolished city fabric.

The two churches by E. P. Warren were both erected at little expense, especially St. Columba's, Wanstead. This has a distinctive appearance inside by reason

of the roof ties that extend over the nave and the graceful arcades. The exterior of the church at Basset is very strong in effect, which is gained by simple means; inside it is plastered, with decorated wooden emblems affixed at the springings. The internal buttresses, which Mr. Warren often employs, will be noticed. The cost of St. Columba's was \$33,500, and the portion of Basset Church \$17,500.

All the foregoing churches are of the Church of England, so that I may refer with interest to one of another denomination—the Presbyterian Church at Putney, of which E. W. Mountford is the architect. The design was accepted in competition and groups happily together. The tower masses up well, and its stone spire is pleasingly arranged in proportion to the rest of the structure. Inside the church is less interesting.



BASSET CHURCH, NEAR SOUTHAMPTON. E. P. Warren, Architect.

The "Village Block" Series.

ARTICLE II.

BY DONN BARBER.

THE rapidly increasing development of country or, perhaps more properly speaking, suburban life in America is having a noticeably important effect upon American architectural practice. Each year shows an astonishing increase in the number of attractive, well-designed country homes ranging from the modest to the sumptuous.

Our people, in deciding to live more in the country, seem to be regarding the cities in the light of their workshops. Their country homes absorb most of their real attention and become interesting in that they reflect the private life of the individual and show us varying ideals of comfort and luxury and degrees of artistic taste and appreciation. Many of these homes are important to our architectural evolution in that they are actually making American architectural history. They belong in many cases to those whose names are known the world over in art, music, literature, science, politics, affairs or society, and are therefore representative of our modern civilization.

We want then the quiet spaciousness of the country; but we are a commercial people, and to settle in the country usually means locating near some established village, for purposes of convenience, communication and accessibility to business. It is interesting, therefore, to speculate as to how this energetic introduction of serious and costly architecture into the environs of our villages is going to affect the architecture of the villages themselves. Let us hope that it will do much for the improvement and betterment of it, and that at as early a date as possible.

Every right-minded man must feel a proper pride in seeing even incipient municipality substantially and decently housed, and appreciate the manifold advantages that spring from having suitable and intelligently designed buildings.

Village architecture, as it exists to-day, seems to have developed for the most part accidentally and along the lines of least resistance and from a sort of hand to mouth state of affairs. Buildings have been constructed when needed, in a cheap, ordinary, inadequate, inappropriate and illogical fashion, with no thought or provision for the future and with absolute disregard for appearance or fitness. Villages are usually in consequence unsightly, unrestful, cheerless and depressing. They serve the utilitarian side of our life after a fashion, but aesthetically they are entirely insufficient.

Our country has grown so rapidly that the utilitarian side of our life thus far has seemingly developed independently of the artistic or ideal side, and public opinion has seldom been known to promote art, although it has always influenced it. The energies of our people have been mainly occupied by commercialism, leaving little or no opportunity for art development except of the most casual and perfunctory sort.

Art in this country has usually been produced by individual ambition coupled with the power to create a change and a personality and tact sufficient to produce this change without apparent hindrance.

The important thing for the architect of the present to appreciate is that he shall be restrained and guided in the planning of the building intrusted to him by the spirit and conditions of its setting and surroundings and influenced by the part his work may play in the future development of the district he is invading. He should sacrifice his pet idiosyncrasies and lose his identity if necessary that befitting entirety may live.

It is not necessary that all the buildings of an entire block should be designed by the same architect in order that they should be architecturally successful and pleasing to the eye. In fact, the separate buildings can reflect beauty, ingenuity and personality of design, and at the same time harmonize with one another, if the controlling lines of the composition, the color effects and the general scale and style of the parts of the composition carry broadly throughout all the buildings.

Architectural completeness consists in grouping together harmoniously the individual units of a composition. It is not necessary that each unit should be an echo of the others, but it is supremely necessary that each unit should play its part in harmony with its neighbor. They should all be planned in such a way as to contribute the most to the ensemble in which they happen to be placed. A common vocabulary is as necessary to architecture as a common language is to literature.

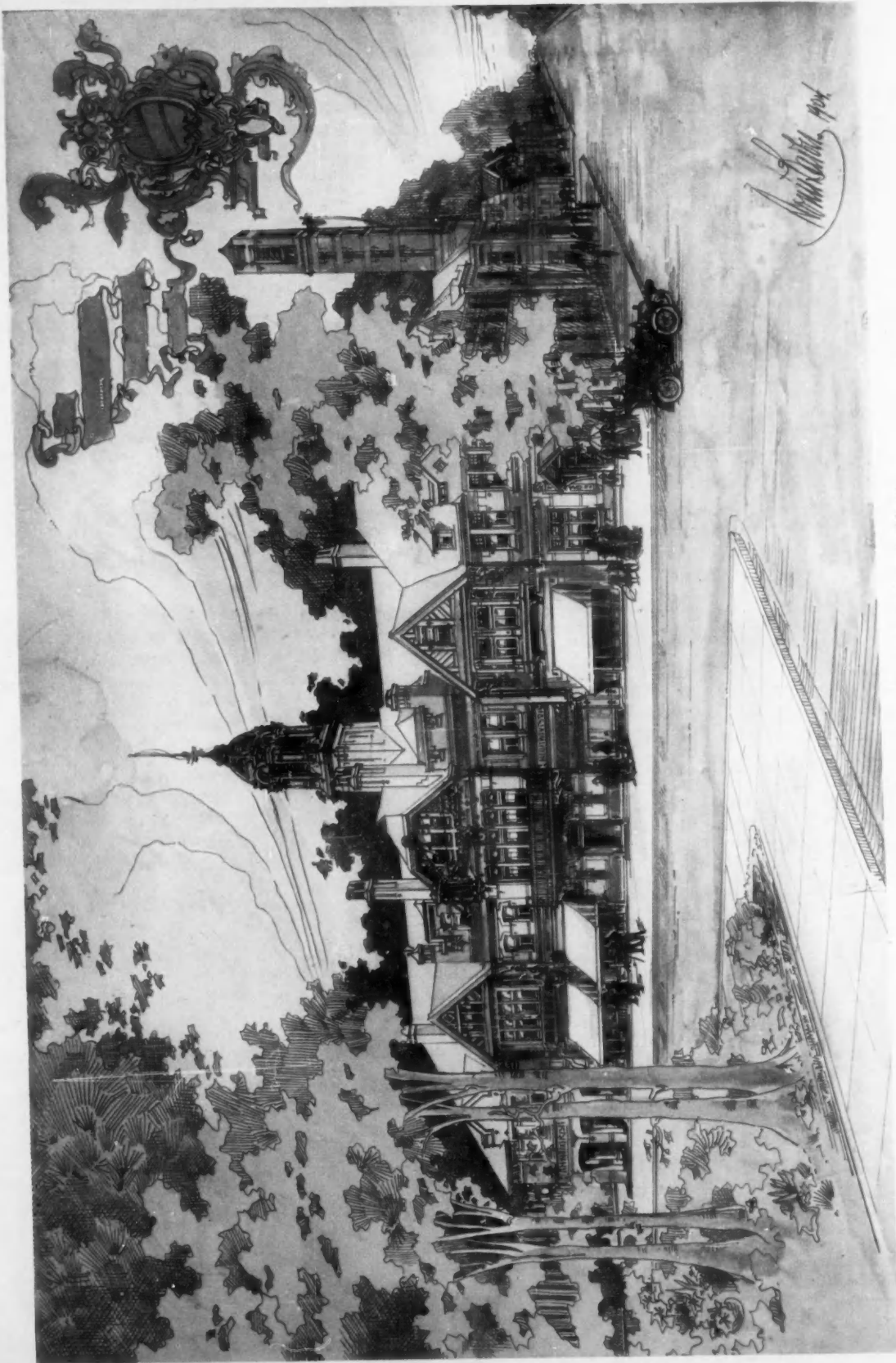
The individual instruments of an orchestra, though differing widely in the sounds they produce, can be so played that their combined sound produces beautiful harmonies, but this only when each is being played as it should be in proper correlation and with regard to the whole effect. We know what bedlam results from each one's playing his own instrument in the theme and key of his choice, utterly regardless of what is going on around him. Ensemble is understood and appreciated, and absolutely demanded in the orchestration of music, but we are slow to require harmony, consistency and comprehensiveness in an architectural idea. Harmony means restfulness, peace, law, economy and order.

The much maligned old brownstone fronts in New York, where the stoops are all the same, where the architectural features are repetitious, and where the cornice lines run continuously, are to the most untutored mind much to be preferred to some of our newer streets where the architecture is perhaps individually much better than that in the conservative brownstone rows, but where color, style and scale run riot and where each house vulgarly claims to be the whole thing.

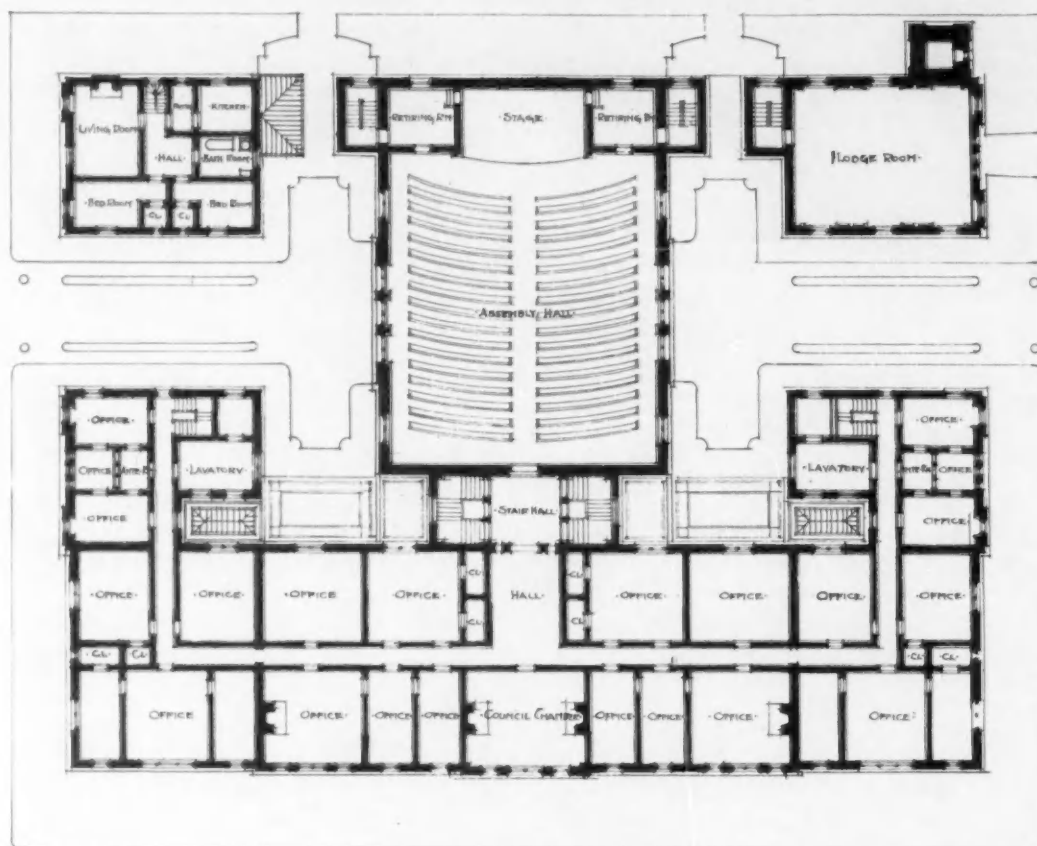
In planning and designing one or more units in a village or city block, it is of absolute importance that the architect shall play his part of the composition in the proper key and be governed in his theme by what others have done and are doing alongside of him.

Uniform and accoutrement have much to do with the imposing effect of a regiment, but in marching this uniformity and order must be carried still further and each man must keep step; though many in numbers, they then become a unit in movement. The same regiment immediately loses dignity, formality and impressiveness, and becomes simply a crowd wandering along, as soon as they break step and walk as best suits the convenience of each individual.

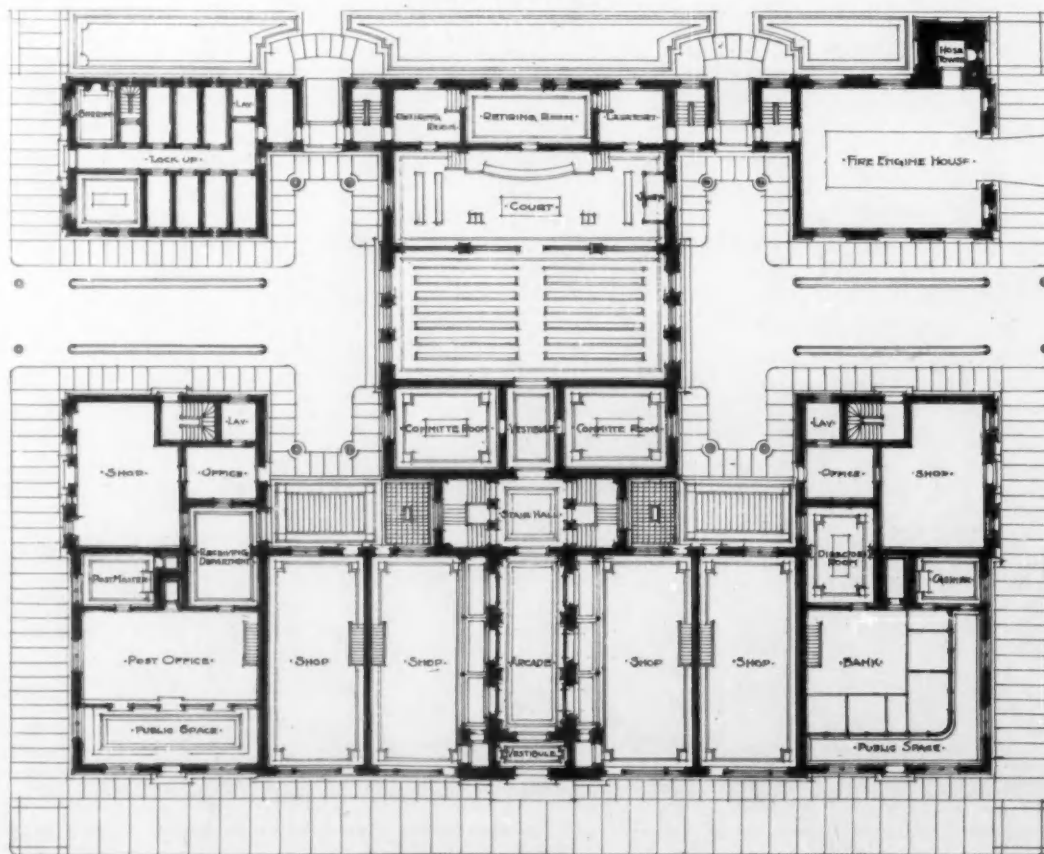
Until such time as our governments require that our



THE VILLAGE BLOCK. Donn Barber, Architect.



SECOND FLOOR PLAN.



FIRST FLOOR PLAN.

PLANS, THE VILLAGE BLOCK.

architecture and buildings shall be properly restricted, the architects can do much for the good of the community by mutually agreeing among themselves as to certain broad restrictions which shall govern their work. This cannot be brought about by the copying or adapting of ancient forms of architecture and fragments of existing monuments and reassembling them to suit new conditions, but must come through the sincere and thoughtful working out of each problem presented to them, using common sense in the matter of style, composition, scale, selection of materials and plan disposition.

Our village architecture should be palpably village architecture and not a cheap, silly imitation of city forms. There is no need of monumentality in village architecture. Picturesqueness is rather more to be desired, inasmuch as it is more appropriate when sensibly and properly handled.

From the rapidly increasing number of men in this country who have spent years in strict artistic training, study and travel abroad, we have a right to look for some outward expression of their fitness and creative ability; some manifestation of their knowledge of logical succession and tradition, and power to produce something really worth while. Let us hope that when the manifestation finally appears, that it will mark a complete departure from the promiscuous use of threadbare classic forms, from the free borrowing of ancient styles, and from the senseless and ignorant imitation of current European architecture.

The principles and methods of good design, composition, planning and proportion are now sufficiently well understood to call for an appropriate, sincere and fittingly correct solution of any given problem.

Let us ever remember that good architecture will inevitably result from the faithful, untiring and invariable application of good, sound, logical common sense and reason to each separate detail of everything we do.

The village block, of which this article is the immediate subject, has been conceived as one between two streets of second importance, facing a public square and containing a small post office, several stores and a bank on the first floor, with small offices above. A central building has been arranged in the rear, containing a court room on the first floor and an assembly room or town hall above. Entrance to this central building is had through an arcade, the stores on either side of which could be subdivided if necessary into small shops or booths.

A police station and fire engine house, disposed one on each of the secondary streets and at the back of the property, complete the grouping.

The perspective sketch shows elevations purposely avoiding any particular style of architecture. The separate buildings are arranged and composed of nondescript units and combined under a single though broken roof. The town hall is accented by a tower motif which affords an opportunity of enriching a point of interest in the center of the roof composition. Architectural motifs have been apparently strewn at random, but an effort has been made to bring about a harmony throughout by the indirect carrying through of certain broad lines and the holding to a certain scale of fenestration, ornament and general masses.

The Structural Design of Buildings.

AN architect charged with the design of buildings in more than one city cannot be but surprised at the differing requirements of various cities governing their structural design. This condition of the several building codes arises from the lack of complete data upon the necessary provision to be made for floor loads, wind loads and other external forces which may act upon the building. Attempts have been made to supplement the existing data, and to this end Mr. Blackall, Mr. Everett and Mr. Shankland, among others, have weighed the actual contents of a number of offices in several buildings in order to find some basis for estimating floor loads.

In October of this year Mr. C. C. Schneider, M. Am. Soc. of C. E., read a paper before the American Society of Civil Engineers, under the title, "The Structural Design of Buildings," with the object of bringing forth an exhaustive discussion and with the hope of bringing out some valuable suggestions that might result in a more uniform practice, as well as greater uniformity in ordinances relating to building construction.

Mr. Schneider has presented for consideration upon which to open the discussion, a set of specifications which were prepared for the guidance of structural designers in the offices of the company with which he is connected. These specifications are intended to cover only the structural features of the modern type of buildings in which steel is a component part.

Mr. Schneider calls attention to lack of uniformity in the requirements for the live loads of floors which vary from 40 to 75 pounds for dwellings, hotels and apartment houses; from 60 to 150 pounds for office buildings; from 80 to 150 pounds for public assembly rooms, churches and theaters; from 75 to 150 pounds for schools.

Another great difference noted in the several building codes is the variations permitted in the column and foundation loads. Some cities permit a reduction of the floor loads carried to the columns and foundation and others do not. It is of course evident without argument that no such difference is logical or rational, and that what is suitable for one community is suitable for another.

In the paper referred to, the writer thereof calls attention to what he terms "the irrational practice of specifying a uniform live load per square foot," and points out that maximum floor loads usually arise from concentrated loads, such as safes, etc., which may be carried on one beam only, and that in but few instances is it possible to make combinations of extreme loads which will produce results equal to the concentrated load of 5,000 pounds assumed for an office fireproof safe. Trials were made of the weight of cases used for holding drawings which gave about 326 pounds per lineal foot, and of a single row of bookcases which gave 170 pounds per lineal foot or 340 pounds per lineal foot for a double row 6½ feet high; all of which does not equal the effect of the concentrated load of 5,000 pounds unless the beam is 30 feet in length or over. A concentrated load of 5,000 pounds is equivalent to the following uniformly distributed loads per lineal foot of beam of different spans:

Spans in feet,	10	20	30	40
Uniform load in pounds per lineal foot,	1,000	500	333	250

If the span is thirty feet or more, then the load of 340

pounds per lineal foot would govern the design, but it is pointed out that ordinary offices are rarely more than thirty feet long, and the probability is not great of a continuous unbroken partition with bookcases in each side.

The table given of uniformly distributed loads permits a comparison to be made of the two assumed methods of loading :

Span of beam in feet.	Distance between centers of beams in feet.			
	4	5	6	7
10	250	200	166	143
15	166	133	111	95
20	125	100	83	71
25	100	80	66	57
30	83	66	55	48
35	72	57	48	41
40	62	50	42	36

Mr. Schneider points out that the application of the method of concentrated loads to each beam has the advantage of having all beam connections proportioned for a load of 5,000 pounds, which not only permits stronger connections, but provides for excessive concentrated loads which frequently occur during erection.

In the design of girders he finds that a concentrated load of 5,000 pounds is not sufficient to provide for all cases of extreme loading, while a uniform load of 1,000 pounds per lineal foot was found to be sufficient unless the uniform load of 40 pounds per square foot is found to give a greater result, which he advocates as the unit for uniform floor loads.

He suggests that floor girders be proportioned by the following three methods and that value used which is the greatest.

First. For a concentrated load of 5,000 pounds.

Second. A uniform load of 1,000 pounds per lineal foot.

Third. A uniform load of 40 pounds per square foot of floor area.

The methods suggested above will be found to give live loads on the beams of 100 pounds per square foot and 50 pounds per square foot on the girders, when the columns are placed 20 feet between centers in either direction with the beams at 5 feet between centers.

If the columns are spaced 25 feet between centers and the beams are on 5 feet centers as before, the live loads will be found to be 80 pounds per square foot on the beams and 40 pounds per square foot on the girders.

In dwellings he suggests that as safes used in private houses do not exceed 2,000 pounds, that this be taken as the maximum concentrated load on the beams and 500 pounds per lineal foot uniform load on the girders in connection with a uniform floor load of 40 pounds per square foot.

The unit loading of 40 pounds per square foot Mr. Schneider considers is sufficient for all ordinary conditions, but recommends that this figure be increased to 80 pounds for ball rooms, drill rooms, assembly rooms and gymnasiums where impact is to be provided for, and still further recommends that the depth of girders and beams should not be less than one-fifteenth of their span in order to reduce deflections and vibrations.

In the matter of loading of columns the building laws of some cities permit a reduction of the floor loads

carried to the columns. The New York law provides that in building more than five stories high, the load on the columns may be reduced five per cent for each story (commencing with the columns carrying the second floor from the top) until a reduction of fifty per cent is made, with the further provision that the dimensions of the smaller columns shall be sufficient for a minimum live load of 20,000 pounds, and that the proportion of the length divided by the least radius of gyration shall be limited to 125.

If these rules be applied to the columns carrying the top floor of an office building they will give a live load of 40 pounds per square foot of floor area (unless this load is exceeded by a concentrated load of 20,000 pounds), and which load under the fifty per cent reduction is reduced to twenty pounds per square foot of floor area on the lower columns. Messrs. Blackall and Everett found that the average maximum live load on an office building floor was 40.2 pounds per square foot, and the average total maximum for the building was 17 pounds per square foot, and therefore the 20 pounds per square foot allowed under this rule would be sufficient to cover the conditions ascertained by these investigators.

In the design of foundations the practice varies widely. In the old days of masonry buildings the usual method was to figure the total weight of the masonry and add the assumed gross floor loads, and then proportion the footing to carry this, on the area determined by this load divided by assumed safe load per square foot. On ground which was practically incompressible this method gave satisfactory results, even if it was not an economical one. With the advent of high buildings which frequently had to be founded on soft and compressible soils, this method was no longer suitable, as the loading of the footings had to be kept uniform in order that the settlement (which could not be avoided) might be uniform. The use of this new method, therefore, involved the determination of the actual dead loads on the various parts of the structure, and the disregard of, or the equalization of live loads, so that the actual pressure on the footings in all parts of the building was maintained at a uniform amount.

In the design of buildings having a framework of iron, it has been customary to design the footings for the total dead load and for a certain percentage of the live load, and usually 50 per cent of the live load has been assumed to be sufficient, on the theory that but part of the live load is on the buildings at any one time.

In Mr. Schneider's paper he suggests that as the foundations have in all probability reached their maximum settlement before the building is occupied, that it would be logical to omit the live load entirely in calculating the footing, but to reduce the pressure per square foot so that with the live load added it will not exceed the safe load on the ground. Thus if the average live load in a fireproof building is taken at 20 pounds per square foot, and the dead load on the interior columns be taken at 100 pounds per square foot for the weight of the floors and partitions (with considerably more on the exterior columns supporting the walls), then for an interior column, for example, or for a column which supports the greatest portion of live load the following calculation can be made:

say 100,000 pounds live load,
 400,000 " dead load,
 500,000 pounds total load.

If two tons per square foot be assumed as the safe load, then $\frac{500,000}{2} = 250,000$ square feet. Now if 125 square feet be taken as the proper area for the footing and the live load be omitted in the calculation, then we have $\frac{400,000}{125} = 3,200$ pounds per square foot for the dead load alone. Then using this as the unit of pressure, the footings may be proportioned for the dead load alone, with uniform loads on all the footings, but with ample provision against the live load ever increasing the actual loads beyond the safe capacity of the ground.

In the design of the framework the author of the paper insists that the skeleton of the building be treated as an independent structure, the same as the towers of a viaduct, and that adequate provision should be made for resistance to wind forces. This provision is now recognized as necessary, and it is required by all the modern building laws. The increased stability obtained during erection together with the facilities wind bracing offers, in the way of permitting the columns to be kept plumb alone should dictate its use, even if no wind forces had to be contended with. When these are taken into account, and the rigidity and prevention of wear at the joints are considered, no further arguments should be needed to insure its use in all high buildings.

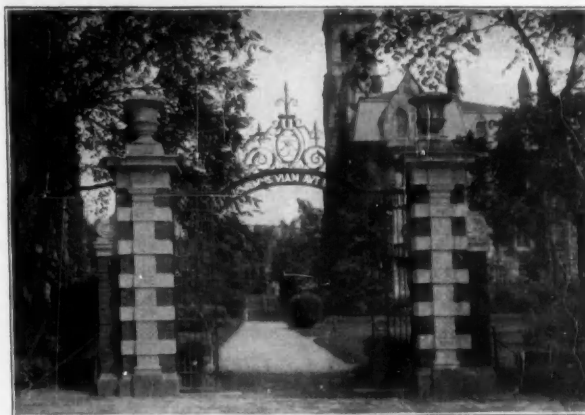
In the discussion brought out by this paper, there was a great deal of consideration given to the proposed change in designs of floor beams from a uniformly distributed load to one of concentrated loading, and also to the low unit of floor loading of 40 pounds per square foot proposed, and by some of the speakers this limit was thought to be too low, when it was remembered that if the determination of the proper sized beams was left to the office boy he might err on the wrong side. There was little doubt in the minds of the speakers that the concentrated load system of figuring the beams was the proper one, and the only difference of opinion seemed to be as to the proper assumption for the live load per square foot when this load governed the design of the floor beams. There was a doubt expressed that the practice of too great an economy in floor beams might lead to insufficiency in the factor of reserve; that while it was possible to exercise a greater economy in floor beam design than the present building laws permitted for certain kinds of structures, yet the possibility of the uses of the building being changed made it inadvisable to make this floor load unit so low, and it was suggested that from 50 to 80 pounds per square foot, with provision for concentrated loads, be substituted for the low limit.

It was brought out in the discussion that the permissible floor loads of dwellings should be kept at such a figure as to permit the use of steel floor beams, so that the use of fireproof construction might be extended, and that a concentrated load of 1,200 pounds for a portable safe might, with a low unit for distributed floor load, be used for this class of buildings. There is no doubt that light floor loads in dwellings are entirely permissible, and that by permitting them the permanent construction of dwellings would be encouraged, with a marked increase in sanitary construction and with great benefit to the community.

Editorial Comment and Selected Miscellany

FALSE ECONOMY.

WHEN a man is building him a house a delay of a few days at the final completion or extras amounting to a few dollars added to the total cost will often assume a magnitude when the house is first occupied out of all proportion to their real importance. In the same way, in the building of our public institutions, a little added expenditure at the start will often be scrutinized with a care that is entirely disproportionate and unwarranted, and which is not justified by the conditions. This is specially true of the added cost of fireproofing

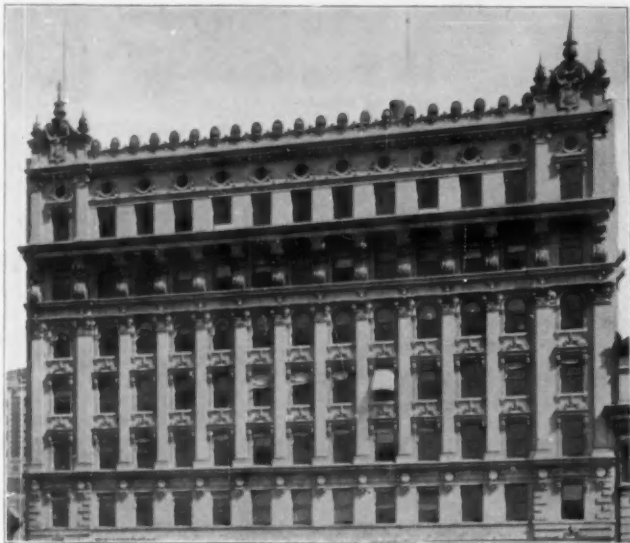


MEMORIAL GATE, UNIVERSITY OF PENNSYLVANIA.
 William Charles Hays and E. P. Bissell, Architects.

over that of the ordinary construction. When a great state is building an insane asylum or a hospital it is a very narrow, shortsighted policy which would cavil at an increased expenditure of the fraction of one per cent which would be necessary to build throughout in a first-class manner, and yet this is what happens very often. No one questions the value of fireproof construction, nor does any one at all familiar with it deny the advisability of so constructing all public buildings that they shall be as far as possible first-class. In the long run it would undoubtedly be far cheaper for the state to put up smaller buildings and construct them better, than to extend second-class constructions and perpetuate insufficient building. It is only the first cost that is more.



ENGINE HOUSE, NEW YORK CITY. Edward P. Casey, Architect.

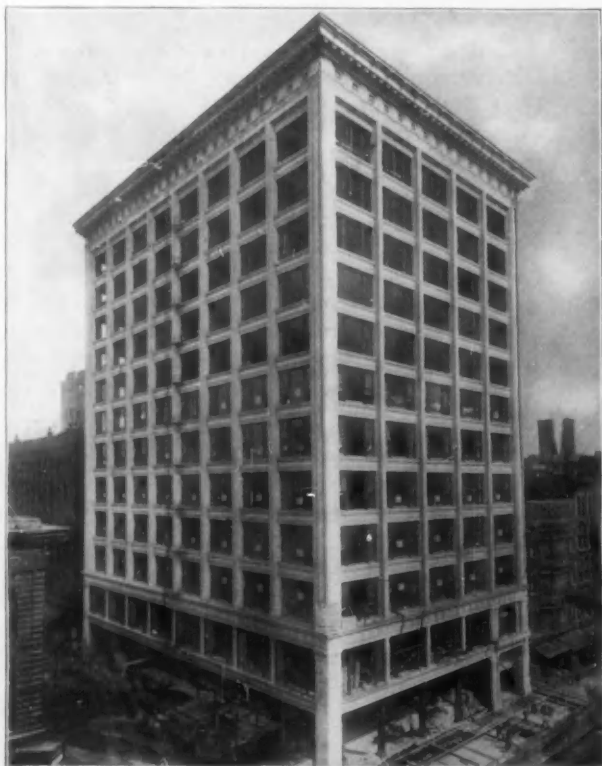


DETAIL OF UPPER STORIES OF OFFICE BUILDING,
NEW YORK CITY.

Henry Ives Cobb, Architect.

Terra-Cotta furnished by Excelsior Terra-Cotta Company.

And when we consider that such structures are built for all time, and will probably last, in the natural course of events, at least half a century, it seems a most mistaken sort of policy to cut short on this part of the work. A building which is insufficiently designed as to exterior effect can be improved and corrected, but the internal construction is fundamental and is altogether too vital in its



THE REPUBLIC BUILDING, CHICAGO, ILL.

Holabird & Roche, Architects.

Fireproofed by the National Fireproofing Company.



DETAIL EXECUTED BY ST. LOUIS TERRA-COTTA COMPANY.

nature to justify such economy in this direction as would render the building anything but the best. If money is not at the command of commissioners to make their asylums or hospitals fireproof they would be doing a public benefaction if they should resolutely refuse to carry on work for which the funds were so limited that it could not be done right, and to allege that mill construction affords any protection against fire, or that it should be seriously considered as any marked improvement over the ordinary cellular inflammable floor construction, does



STABLE, LEXINGTON, KY. Copeland & Dole, Architects.

Roofed with American "S" Tile, made by Cincinnati Roofing Tile and Terra-Cotta Company.

not relieve any commission from its duty of insisting upon thorough and lasting fireproof construction.

FIREPROOFING WHICH DOES NOT FIREPROOF.

THE ordinances of some of our larger cities unfortunately recognize plaster as a fireproofing material. We use the word "unfortunately" advisedly. Plaster of Paris is in some respects one of the best non-conductors of heat with which we are commercially acquainted, and as a mere insulating material it would answer a purpose of protecting steel from the action of heat, if that were all that a fireproofing material is called upon to accomplish. Because of its non-conducting qualities repeated attempts have been made to utilize the material in various fireproofing systems, but the experience of the Baltimore fire alone is ample to demonstrate that any compound having plaster as its base is worthless after a relatively slight exposure to fire alone and is speedily destroyed by

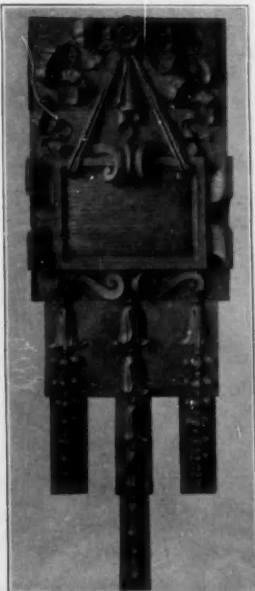


DETAIL BY GEORGE E. MURPHY, ARCHITECT.
Perth Amboy Terra-Cotta Company, Makers.



ENGINE HOUSE, BROOKLYN, N. Y.
Adams & Warren, Architects.

combined action of heat and water. Notwithstanding the frequent practical lessons which conflagrations have shown in this respect, some of our building statutes continue to admit the protective qualities of plaster, and even go to the length of placing one inch of plaster, even when mixed with lime and applied upon metal lathing, as being the equivalent of far greater thickness in other and more reliable materials. Nor is this all. The ordinances in the cities referred to admit one inch of plaster on metal lathing as being sufficient fireproofing for structural steel, but do not stipulate just how it shall be applied, and accordingly a practice has arisen and received the sanction of the authorities of considering mere ordinary plaster applied to metal lathing stretched across on the ceiling from beam to beam as being sufficient to pass for fire protection. Likewise in some of our largest buildings the columns have been protected by nothing more reliable than an enclosure of metal lathing and a scant one inch of plastering. No one who has had the slightest experience with actual tests of



DETAIL EXECUTED BY
NEW JERSEY
TERRA-COTTA CO.



CENTRAL PARK PUMPING STATION, CHICAGO, ILL.
R. Bruce Watson, Architect.
Terra-Cotta furnished by Northwestern Terra-Cotta Company.

building material would undertake to claim that such construction efficiently protects the steel. It passes the law, but is scientifically and positively bad in that because of its cheapness it acts as a discourager of real fireproofing. This system has even been carried further. So-called first-class buildings have been constructed with pitch roofs supported by long span steel trusses or girders, the only fireproofing of which was that afforded by the plaster ceiling stretched on metal lathing immediately beneath the trusses and by a fire-proof construction between the roof beams overhead, leaving the steel which actually supports the whole entirely unprotected. There are many cases where real safety does not call for any more fireproofing than the above-men-



FIRE PATROL HOUSE, NEW YORK CITY.
D'Oench & Simon, Architects.

tioned methods afford, but it is certainly wrong to designate such construction as being in any sense fireproof, and it would be far better to recognize that under some cases steel beams and trusses do not require special protection than to assume that a mere ceiling and roof will sufficiently protect all the construction between to such degree as to entitle it to be classed as fireproof. The experience of all large fires has shown that a single inch in thickness of any known material, however well designed or applied, is not sufficient to protect structural steel, and that plaster least of all, which goes to pieces under water and disintegrates under fire, should ever be relied upon for constructive purposes.

HOW TO DISCOURAGE FIREPROOF CONSTRUCTION.

THE Boston building law prescribes that every structure over seventy feet in height shall be of first-class, that is to say, fireproof construction, the maximum



STABLE, NEW YORK CITY. Charles W. Romeyn, Architect.

height allowed for any building being two and a half times the width of the street, or one hundred and twenty-five feet. Compared to modern buildings elsewhere this extreme limit of height would not be called at all excessive, but even that maximum has recently been curbed by legislative enactment. A commission has been at work under the instruction of the Legislature districting the city into areas of two classes, in the first of which buildings may be carried to a maximum height, while in

the second no structure shall be carried more than eighty feet high. The business portions of the city are rapidly



DETAIL EXECUTED BY NEW YORK ARCHITECTURAL
TERRA-COTTA CO.

encroaching upon the Back Bay residential quarters, and the manifest intent of the statute was to minimize the incongruities of the portion which lies between what is still residential and what has for some years been purely for business, so that Boston shall have as little as possi.



DETAIL BY E. TOBEY, ARCHITECT.
Atlantic Terra-Cotta Co., Makers.

ble of the startling contrasts of the sky-scraper and low buildings which are always so unpleasant on the fringes of the commercial district.

From an æsthetic standpoint the action of the commission is deserving of the highest praise, and they have considered and adjusted the conflicting real-estate interests in as fair a manner as can be expected, but the immediate result of their action and of the statute itself will be to put a premium upon second-class buildings and to discourage fireproof construction. It is now often



DETAIL BY F. S. BARNUM & CO., ARCHITECTS.
American Terra-Cotta Company, Makers.



HOUSE, BEVERLY, MASS.
Guy Lowell, Architect.
Roofed with Ludowici Roofing Tile.

the case that where the real-estate conditions do not at present justify building more than five stories, the construction is so arranged that additional stories can be built when desired and the whole building made fire-proof. Where, however, eighty feet is the limit of any construction, a consideration of the rights of others will hardly be enough to persuade a property owner to put up a first-class building. It will therefore inevitably happen that in the low building districts first-class structures will not be put up, because of the larger expense involved, with the readiness that they have been in the recent past. We do not build modern structures for ten or fifteen years, but with the expectation that they shall last at least a lifetime; and looking ahead to Boston as it will be forty or fifty years hence we believe that the result of the application of this statute will prove to have worked a degree of harm to the best interests of the city which will far more than offset the æsthetic gain to a district which at its best is in a state of transition.

IN GENERAL.

The architects of Montana have banded together under the name of the Montana Association of Archi-



UNION AKRON STAR BRAND CEMENT USED THROUGHOUT
CONSTRUCTION OF THIS BUILDING.
Esenwein & Johnson, Architects.

ects. A constitution and by-laws, based upon those governing the American Institute of Architects, have been adopted. The officers are C. S. Haire, Helena, president; J. F. Everett, Missoula, secretary; A. J. Gib-



DETAIL BY GOULD & CHAPMAN, ARCHITECTS.
Standard Terra-Cotta Works, Makers.

son, Missoula, treasurer; M. D. Kern and J. G. Link, Butte, directors.

Henry A. Schulze and Arthur Brown, Jr., have formed a copartnership for the practice of architecture, under the firm name of Schulze & Brown, offices Hayward Building, San Francisco, Cal.

Joseph D. Boyer has opened an office for the practice of architecture in the Burres Building, Urbana, Ill., where he would be glad to receive manufacturers' catalogues and samples.

W. H. Lord, architect, 10 Church Street, Asheville, N. C., whose office was recently destroyed by fire, would be glad to receive manufacturers' catalogues, samples and price lists.

Hermann V. von Holst, architect, has opened offices in the Rookery Building, Chicago, Ill., and desires manufacturers' catalogues and samples.

The architectural terra-cotta used in the Shelter, Prospect Park, Brooklyn, McKim, Mead & White, architects, illustrated in the plate form of this number, was furnished by the Atlantic Terra-Cotta Company.

Competition for a Fireproof House

Constructed of Terra-Cotta Hollow Tile Blocks To cost \$10,000

First Prize, \$500 Second Prize, \$200 Third Prize, \$100

PROGRAMME



THE possibilities in the use of burnt clay in its various forms in our domestic architecture have only begun to be realized.

That dwellings of moderate cost should be made fireproof is not only recognized as desirable, but practicable.

The object of this competition is to call out designs for a house, the walls, floors and partitions of which are to be of terra-cotta hollow tile blocks.

The cost of the house, exclusive of the land, is not to exceed \$10,000. Designs calling for a more expensive house will not be considered.

A detailed statement of costs must accompany each design. This statement is to be typewritten on one side only of a sheet of paper measuring 11 inches x 8½ inches.

A further object of this competition is to encourage a study of the use of burnt clay products of the particular class mentioned, in an artistic as well as practical manner, and to obtain designs which would be appropriate for such materials.

In the selection of blocks for exterior walls, terra-cotta hollow tile fireproofing blocks must be employed, and not architectural terra-cotta blocks.

REQUIREMENTS: The house is supposed to be built in the suburbs of a large city, upon a corner lot, with a frontage of 100 feet towards the south and 150 feet on the side street towards the east. The grade is practically level throughout. The house is to be two stories high with an attic. This attic may be either in the pitch of the roof or a third story may be treated as an attic with a flat roof. On the first floor there is to be a reception room, a library, a dining-room, a kitchen and the ordinary allowance for pantries, coat rooms, stairways, etc. The front hall may be treated as desired. In the second story there are to be two bathrooms, four chambers, a sewing room, a den, linen closet, etc. The third story should contain at least two servants' rooms, besides a storeroom. Fireplaces, bay windows, seats, etc., are at the option of the designer.

The clear height is to be in first story 10 feet, second story 9 feet, third story optional with the designer. The cellar need not be specially planned, but will have a clear height of 8 feet. Arrangement of piazzas to be left with the designer.

CONSTRUCTION: While the method of construction for walls, floors and partitions is to be determined by the designer, the following suggestions are offered as being practicable and admissible:

First. Outside walls may be of hollow tile blocks 8 inches thick, lined on the interior with 4-inch furring tile, the treatment of the faces of the blocks to be appropriate for such materials.

Second. Outside walls may be of hollow tile blocks 8 inches thick, lined on the interior with 4-inch furring tile, the face of the wall to be rough cast or plastered.

Third. The outside walls may be faced with brick, with a backing of 8-inch hollow tile blocks.

Fourth. The outside wall may be built with an outer and inner wall, with an air space of 4 inches between, using in each wall a 4-inch hollow tile. The treatment of the face of such a wall, and the manner of bonding the outer and inner walls, are left to the designer. The plaster finish may be applied direct to the interior surface of such a wall.

If hollow tile blocks are used for facings, any special features in the finish or treatment of their exposed surfaces should be given in a footnote on sheet showing elevations.

For the interior partitions terra-cotta blocks are to be used.

For the floors one of the long span, terra-cotta hollow tile block systems now on the market, which are adapted up to spans of 20 feet without the use of steel beams, or a system which employs terra-cotta hollow tile blocks in connection with light steel construction.

DRAWINGS REQUIRED: On one sheet the front and a side elevation, at a scale of four feet to the inch; also plans of first and second floor, at a scale of eight feet to the inch, and on another sheet details showing clearly the scheme of construction for the exterior walls, the floors and the partitions, together with other details drawn at a scale sufficiently large to show them clearly. Graphic scales to be on all drawings.

The size of each sheet is to be exactly 24 inches by 36 inches. The sheets are not to be mounted.

All drawings are to be made in black line without wash or color. All sections shown are to be crosshatched in such manner as to clearly indicate the material, and the floor plans are to be blocked in solid.

Each set of drawings is to be signed by a *nom de plume* or device, and accompanying same is to be a sealed envelope with the *nom de plume* on the exterior and containing the true name and address of the contestant.

The drawings are to be delivered flat at the office of THE BRICKBUILDER, 85 Water Street, Boston, Mass., on or before April 15, 1905.

The designs will be judged by well-known members of the architectural profession.

In making the award the jury will take into account, first, the fitness of the design in an artistic sense to the materials employed; second, the adaptability of the design as shown by details to the practical constructive requirements of burnt clay; third, the relative excellence of the design.

Carefully made estimates giving relative costs of fireproof and ordinary wood construction for houses built from the designs awarded the three cash prizes will be obtained by the publishers of THE BRICKBUILDER, and given at the time the designs are published.

The prize drawings are to become the property of THE BRICKBUILDER, and the right is reserved to publish or exhibit any or all of the others. Those who wish their drawings returned, except the prize drawings, may have them by enclosing in the sealed envelopes containing their names ten cents in stamps.

For the design placed first in this competition there will be given a prize of \$500.00.

For the design placed second a prize of \$200.00.

For the design placed third a prize of \$100.00.

In the study of this problem, competitors are invited to consult freely with the manufacturers of burnt clay fireproofing or their agents. This competition is open to every one.

